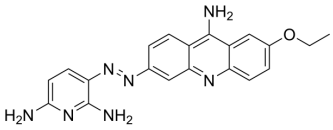
MYCMI-6

Cat. No.:	HY-124675
CAS No.:	681282-09-7
Molecular Formula:	$C_{20}H_{19}N_7O$
Molecular Weight:	373.41
Target:	c-Myc; Apoptosis
Pathway:	Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	1 year
	-20°C	6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : 2.4 mg/mL (6.43 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6780 mL	13.3901 mL	26.7802 mL
	5 mM	0.5356 mL	2.6780 mL	5.3560 mL
	10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 0.5% CMC-Na/saline water
   Solubility: 5.56 mg/mL (14.89 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

MYCMI-6 (NSC354961) is a potent and selective endogenous MYC:MAX protein interactions inhibitor. MYCMI-6 blocks MYC-driven transcription and binds selectively to the MYC bHLHZip domain with a K_d of 1.6 μM. MYCMI-6 inhibits tumor cell growth in a MYC-dependent manner (IC_{50}<0.5 μM). MYCMI-6 is not cytotoxic to normal human cells. MYCMI-6 induces apoptosis[1].

In Vitro

MYCMI-6 (NSC354961) (6.25 μM; 48 hours) selectively suppresses MYC-driven tumor cell growth with high efficacy[1]. MYCMI-6 significantly inhibits growth of Burkitt's lymphoma cells (Mutu, Daudi and ST486) - another classical example of a MYC-driven tumor, having translocations of MYC to one of the immunoglobulin loci - in a dose-dependent manner with an average GI_{50} of 0.5 μM. Treatment of MCF7 cells with the MYCMI-6 for 24 hours significantly decreased MYC:MAX isPLA signals to 7%. Titration showed an IC_{50} for inhibition of MYC:MAX of less than 1.5 μM for MYCMI-6 by isPLA. MYCMI-6 inhibits the MYC:MAX heterodimer formation with an IC_{50} of 3.8 μM. MYCMI-6 efficiently inhibits anchorage-independent growth of MYCN -amplified neuroblastoma cells with GI_{50} values of <0.4 μM[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	MYCN-amplified neuroblastoma cells (IMR-32, Kelly and SK-N-DZ), MYCN-non-amplified neuroblastoma cells (SK-N-F1, SK-N-AS and SK-N-RA)
Concentration:	6.25 μM
Incubation Time:	48 hours
Result:	Reduced growth of the MYCN-amplified cell lines significantly stronger than the MYCN-non-amplified cell lines.

In Vivo

MYCMI-6 (20 mg/kg; i.p.; daily for 1-2 weeks) induces massive apoptosis and reduces tumor cell proliferation, tumor microvasculature density and MYC:MAX interaction in a MYC-dependent xenograft tumor model[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6-8 weeks old athymic nude mice (bearing MYCN-amplified SK-N-DZ neuroblastoma cells) [1]
Dosage:	20 mg/kg body weight
Administration:	I.p.; daily for 1-2 weeks
Result:	A dramatic increase in the extension of apoptotic areas in the tumors and a significant increase in non-proliferative areas as determined by Ki67 staining in tumors.

CUSTOMER VALIDATION

- Nat Genet. 2024 Mar 7.

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REFERENCES

[1]. Castell A, et al. A selective high affinity MYC-binding compound inhibits MYC:MAX interaction and MYC-dependent tumor cell proliferation. Sci Rep. 2018 Jul 3;8(1):10064.

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